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ECONOMIC REPORT TO THE GOVERNOR

STATE OF UTAH
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Overview

The rapid pace of change in the economy over the past 20 years is having a profound effect at both the national and state level. These changes have been the result of dramatic technological advances over the last several decades, an increased globalization of the economy, and the on-going deregulation of key sectors of the economy such as transportation, communications, financial services and utilities. In turn, these changes are having equally dramatic effects on the factors of production, especially the labor force; which in turn has important ramifications for state economic development activities.

The "New Economy"

New information technologies have been instrumental in the emergence of a "global" economy in the last ten years. Consumers are buying more foreign goods, a growing number of firms now operate across national borders, and savers are investing more than ever before in far-flung places. Indeed, globalization has become the buzzword of the 1990s, and national economies are undoubtedly becoming steadily more integrated as cross-border flows of trade, investment and financial capital increase.

However, a global economy does not necessarily mean an economy where foreign trade is predominant -- which is certainly not the case in the United States. Although the external trade sector (imports and exports) is increasing rapidly in the US, it was only 6% of Gross Domestic Product in 1970, a little over 10% at the start of the decade, and is still less than 20% of GDP.

In addition, despite popular perception, while the globalization of the economy undoubtedly puts competitive pressure on firms, most international trade is and will remain for the foreseeable future, between the industrial countries, limiting the impact of newly industrializing economies on domestic labor markets. Furthermore, the expansion of the world economy to newly industrializing areas in Asia and in Latin America creates new markets, raises demand for goods and services, and thus increases employment in both developing and developed economies.

A global economy is, however, one in which strategic, core activities function in real time on a worldwide scale. And this globalization became possible only recently because of technological infrastructure provided by telecommunications, information systems, electronic machinery, and computer-based transportation networks. Thus much of capital, technology, management, information, and core markets are global. Further, it is projected that new technology will encourage further integration. Telecommunication prices will probably fall even more sharply over the next decade.

As the "new economy" grows, it alters ever more aspects of American business and is affecting even more parts of the country. Productivity figures are finally starting to show that the accessibility of up-to-date information offered by information technology has allowed substantial improvements in corporate efficiency. Production planning is made easier; inventories can be reduced; delivery lead-times fall; and the nature of distribution is altered. The Internet and its associated technologies will help make markets progressively more transparent by disseminating real time information, allowing buyers and sellers to compare prices in different countries. All of these factors increase the flexibility of capital goods, making capital investment more attractive and productive.

On the other hand, we are all familiar with the negative side of the ledger: the worry that US living standards are falling and Americans aren't as well off as they were 25 years ago. By some calculations, after adjusting for inflation, average wages have been stagnant or declining since the mid-70's, and it now takes two workers to maintain a middle-class lifestyle. The perception is that the United States, with a widening trade deficit and fewer manufacturing jobs, is falling behind as other nations grow faster.

In one sense, the scope of the problem tends to be exaggerated. In many economies, competition (domestic as much as foreign) and new technology are touching people who were hitherto immune from such forces. As the Economist puts it, "While it seems to many that the world has changed in a terrifying way; often it is merely that their corner has become more like the world at large". Moreover, crucial aspects of "living standards" are debatable. Have real household earnings stagnated, as is so often reported? It depends what you mean by "real", because inflation adjustments have been notoriously problematic. It depends what you mean by "household", because the composition of American households has changed a lot over the last twenty-five years. It depends what you mean by "earnings", because employers now pay their workers a significantly larger share of total compensation in the form of non-wage benefits.

Indeed, the complexity of the new interactions in the new global economy can barely be captured by traditional measures. According to a report by the Organization for Economic Cooperation and Development, the evidence increasingly shows that the impact of trade on the labor force has been underestimated. The best estimates are now that between 1960 and 1990, skilled workers in Europe and the US benefited from the process of globalization, both in employment and wages. But unskilled workers were buffeted by competition from developing countries. By most statistics, demand for unskilled labor has dropped by some 20 per cent, and real wages have declined.

In reality, technology simultaneously creates and destroys employment. The balance between the two is affected by individual attributes, firms' strategies, and government policies. Globalization of production does put pressure on workers and eliminates many unskilled manufacturing jobs in the advanced economies, but it also creates jobs, both in skilled professional occupations as well as unskilled services. Aren't most new jobs in the low-skilled, MacDonald-type jobs? This is another of the myths that seem to dominate the debate. High-skilled jobs are more in demand by employers than low-skilled ones, and overall the occupational structure is being upgraded. Of the 50 jobs projected to be the fastest growing in Utah over the next decade, 36 would fit this pattern; as would half of the 50 occupations projected to have the most total new jobs. Overall, the dominant trend is towards the automation of routine tasks and the retraining and upgrading of work content in middle skill level job categories.

In a sense the "new economy", or "digital economy", or "technology economy" means no more than " the rapid growth of high-tech firms and workers". According to the US Commerce Department, in real terms, American companies increased their annual investment in computers fourteen-fold in the 1990s, while other capital investment

hardly rose at all. As a result, the info-tech industry has grown at a startling rate. Although perhaps somewhat overstated, it claims that between 1995 and 1998 the IT sector, despite accounting for only about 8% of America's GDP, contributed, on average, 35% of the country's economic growth. By 2006, according to its report "The Emerging Digital Economy II", almost half the American workforce will be employed in industries that are either big producers or intensive users of information technology.

Economic Development Activities

While the nature, or even the existence of the "new economy" may be debated, the trends in the US economy outlined are having a profound effect on industries and occupations. These, in turn, have important ramifications for state economic development activities.

Although every industry has different requirements, there are four main components of a state's "business climate". The first, essentially outside government control, is location. In Utah, with a central location among the markets of the west, abundant natural resources, and relatively low energy costs, economic development efforts have traditionally benefitted from location factors.

The second is the quality and availability of infrastructure, including such things as telecommunications, airports, highways, and railroads. The new economy has moved communications infrastructure to the top of the list. In anticipation of the 2002 Olympic Winter Games, communications companies are spending some $200 million to install more than 400 miles of fiber-optic cable, 10 high-speed SONET telecommunications rings, and an extensive high-speed networking system. This will be part of Utah's Olympic legacy. In other areas, Utah is stretching its resources to maintain a leading position. The state is spending some $2.8 billion over 10 years for roads and transportation infrastructure. The Salt Lake International Airport is planning a $1.26 billion expansion.

The component has been receiving the most attention the last few years is the state's "incentive packages" and the tax and regulatory environment. Although most experts agree incentives can play a critical role in picking one site over another, all other factors being equal, they also agree that incentives are almost never the primary consideration. According to Plants, Sites, and Parks, a site selection magazine, companies make their relocation decisions based on such key factors as the quality, cost, and availability of the labor pool, transportation network, market proximity, facility costs, utility infrastructure and executive lifestyle. They cite a 1998 survey which found that business people replied "no" by a 5-to-4 ratio when asked: "Do local or state government incentives play a part when considering a corporate relocation?"

By far the most important consideration is the quality and availability of labor. This is not surprising when on average labor accounts for 58% of total business costs. Further, labor costs are about 14 times that of state and local business taxes. In the past the other factors, such as natural resources and proximity to markets and suppliers were predominant, and are clearly still important; but in a technology driven economy, competitive advantage is based primarily on the education and skills of the labor force.

In their recent report "Economic Development Policies of the States", the Utah Foundation determined that, "Economic incentives are, at best, tools that can occasionally make the difference in attracting a company to the state or in helping an existing company expand in the state. This is true when other essential items, such as a good workforce, adequate infrastructure, stable fiscal environment and a generally high quality of life are already in place. Most important is the state's workforce. This means continued focus on a quality educational system, both public and higher education. There is substantial agreement among Utah economists that it is Utah's fast-growing and productive workforce that is the state's greatest asset. The state high birth rate assures the state of a fast growing workforce. The state's educational system (with sufficient financial, public and parental support) must mold this workforce into a well-educated one."

This rapid labor force growth has been a substantial advantage for Utah. Since 1960 the population in Utah has increased an average of 2.3% per year, compared to 1% for the US. And during this period, Utah often enjoyed substantial in-migration of skilled workers. Secondly, it is relatively well educated. Utah ranks 2nd, 81.5, in percent of the population completing high school. It ranks 4th in those with a high school diploma and a college education up to a Bachelors (62.9%), and it places 14th (22.2%) for those with a Bachelor's or higher. Third, it is comparatively young. The average age of the US labor force is over 41 years, while in Utah it is 37 years. With a young labor force comes competitive wage rates. The national average annual wage in 2000 is projected at $34,500 compared to $28,400 in Utah. Finally, surveys of companies and business executives routinely complement Utah workers on their strong work ethic.

On the other hand, the ability of the system to provide basic skills is being called into question. According to a recent survey conducted by the National Association of Manufacturers and Grant Thornton, 88% of US manufacturers report a shortage of qualified workers in at least one job category. 60% say their workers lack basic math skills, 55% find their workers are seriously weak in basic writing and comprehension skills, and 63% say their workers are tardy, chronically absent, or unwilling to work a full day. Half found it difficult to give employees more responsibility. Two thirds say they are having difficulty improving productivity and upgrading technology.

Employers also increasingly recognize that once hired, they need to retain their qualified employees. According to the National Association of Manufacturer's survey, just over 80% of respondents said that they offer educational and training opportunities, beyond remedial programs, to employees. In addition, 96% of respondents spent some amount on training their non-management workers, and nearly half invest 2% or more of payroll to train their shop floor and other hourly workers. This compares to 1991, when their survey found that companies were spending an average of less than 0.5%.

According to recent Bureau of Labor Statistics figures, employers with 50 or more employees spend about $330 per year per employee on training, not including the wages of the employees or the cost of materials and equipment. This figure alone is over $18 billion per year. The Progressive Policy Institute estimates that corporate training budgets are about 0.7 percent of GDP, or $58.6 billion. However, all employees are not equal. Training is more prevalent among highly educated workers than other workers: 61 percent of college-educated workers participated in on-the-job training in 1991, compared to 22 percent of workers with a high school degree. This may be in part because more-educated workers are in greater need of training to perform more complex jobs, but there are other possibilities discussed later.

An indication of Utah's lead in the training area is a survey of employers sponsored by the Department of Community and Economic Development, also in 1991. At that time, 87% of Utah

employers surveyed offered some "in-house" training, and of those 12% offered basic/remedial skills, 64% management training, and 86% training in technical skills. The percentages have undoubtedly increased since.

Nevertheless, a December 1995 survey conducted by Dan Jones and Associates for the Utah Partnership for Educational and Economic Development found that the primary challenge facing employers in Utah is finding qualified applicants (56%). 57% said they needed employees with basic reading, math, and communication skills. 20% cited a need for learning ability and technological literacy. Almost 40% claimed problems finding employees with a strong work ethic/positive character attributes.

The Contribution of Education to Economic Performance

"Human capital"-- the skills and competences of individuals -- is a powerful determinant of national and state economic performance, business productivity, and individual labor market outcomes. It is a long-standing fact in most countries that better-educated individuals have, on average, higher earnings, higher rates of labor force participation, and lower unemployment than those with fewer qualifications. According to a study by the Organization for Economic Cooperation and Development:

Labor force participation rates rise with educational attainment. The relationship is especially strong for women. In the US the participation rate rises from 45% for women without a high school diploma to 82% for those with a university education. The relationship is somewhat weaker for men, because their participation rates approach universal levels. However, even in the case of men, those with less than a high school diploma have markedly lower participation rates than any other group. The US numbers are a 72% participation rate for men with less than a high school diploma, rising to 93% for those with a university education.

The relationship between educational attainment and earnings is even stronger than for labor force participation. According to the Bureau of the Census, while it is true that only about 22% of all jobs require a bachelor's degree or more, and another 23% an associates degree or intensive on-the-job training, the economic return associated with increased schooling, especially a college education, is clear and growing. Since 1963 the importance of a college education has increased for men. College-educated men had a median income of $47,126 in 1997, a 22 percent increase since 1963 ($38,496 in current dollars). In all other educational groups, men's incomes have actually declined, in real terms, since 1963. The incomes of women have risen for all educational groups since 1963. The largest increase is among women with a bachelor's degree or higher, whose incomes have grown $10,338 to $29,781 in 1997, or 53.2%.

There is a strong relationship between educational attainment levels and unemployment. In all countries, the least qualified experience higher unemployment than anyone else, usually by a wide margin. In the US, the unemployment rate for persons with less than a high school diploma is twice that of graduates and over three times that of those with a university level education.

One line of reasoning goes that the better labor market experience of more educated workers is attributable to the fact that education provides skills, competencies, and knowledge that enhance productivity. Another argues that employers prefer to hire more educated persons not because of the productivity-enhancing qualities of education, but because educational attainment serves as a screening device enabling them to select individuals who are inherently more productive or who are more likely to succeed in high-productivity jobs. However, according to the OECD, research increasingly shows that education plays a significant role in human capital formation, over and above any function as a screening device. They support the view that human capital growth contributes positively to national economic performance.

Conclusion

In the US and other rich economies the mix of jobs is changing rapidly, away from manufacturing and towards services, both old and new. But what many of the new jobs have in common is that they are based to a greater extent than before on information. The new jobs in tomorrow's industries, in manufacturing and services alike, will call for more than learning fixed, structured tasks. They will require workers that are literate in both reading and numbers, adaptable and trainable- in a word educated.

It has also become apparent that labor market requirements are changing so quickly that in order to maintain their employability, individuals should seek to acquire new skills and competencies, over and above those acquired in initial education and training. One of the main reasons for the labor market success of people with high levels of educational qualifications is that they are more likely to have the skills and motivation to continue learning throughout their lives.

Technology will continue to power globalization, and by allowing more efficient use of world resources, globalization will boost average incomes. However, the costs and the benefits will be unevenly distributed. Many people- notably unskilled manufacturing workers in rich economies-will find the demand for their labor falling as the jobs they used to do are mechanized or performed more cheaply elsewhere. Employment figures for the US from the mid-80's to the mid-90's show that for 33 major industry groups and divisions, the share of jobs requiring less than a H.S. diploma declined in 28.

Thus, the high levels of investment in training by employers noted earlier also tend to widen the gap in learning and economic outcomes between the least- and most- qualified. Those with low educational qualifications tend to be doubly handicapped, first by a lower overall likelihood of participating in various forms of learning, and second by the fact that they are more likely to be concentrated in industries in which employment of less skilled workers is declining in relative, and in many cases, absolute terms.

In summary, the evidence on the contribution of continuing learning to enterprise performance and individual labor market outcomes show that there are potentially strong financial incentives for governments, businesses, and individuals to invest in training. Commenting on one of its own studies, the OECD observed "this emphasis on lifelong learning in an organization concerned primarily with economic development reflects the growing realization that knowledge is potentially the key factor input that determines comparative advantage in advanced modern economies".

However, Utah state and local government already spends some $3.5 billion on education. Other than striving to maintain adequate levels of funding for both public and higher education, what can government do to promote growth in productivity and raise overall living standards?

Perhaps most importantly, it can play a role in making learning more affordable by helping to reduce its costs. This can be accomplished by encouraging and disseminating innovations that enhance the efficiency and quality of learning, regardless of the setting in which it occurs. Possible measures include formally evaluating the cost-effectiveness of different teaching and learning approaches, including those that are technology-based; seeking ways to stimulate competition among training providers; or finding other means to strengthen incentives for providers to adopt cost-effective teaching and learning approaches.

The fact is; as noted above, the preponderance of training actually carried out in a modern economy provided at the employer's initiative. The evidence, supported by studies in Utah as far back as 1987, suggests that the skills companies seek in workers and which they are reluctant to teach themselves are the elementary ones of effective work habits, basic mathematics and literacy. Although entry-level industry-related skills are desirable, at a time of tight labor markets across the country, many firms mainly want not trained but trainable workers.

Future economic growth and prosperity depends on all potential workers having the skills, motivation and opportunities to learn, and keep learning, throughout their working lives. Without the adaptability and flexibility that learning can bring, individuals, businesses, states, and the nation will struggle in the face of economic and social changes. ❊